ABSTRACT OF THE DISCLOSURE

METHOD TO IDENTIFY VACCINES

5   The present invention calls utilized genes differentially expressed in target

cells to design vaccines to generate an immune response. Unlike prior art methods

that seek to identify antigenic proteins from phenotypic analysis, the subject method

applies functional genomics for antigen identification. The method is exemplified

herein and therefore provides compositions and methods for inducing an immune

10   response against gp100 melanoma cells and for inducing an immune response

against HER-2$^+$ cells. Cancer vaccines and adoptive immunotherapeutic methods to

treat and prevent conditions associated with the presence of these cells in a subject

also are provided. The methods can be practiced by administering the appropriate

gene or cancer vaccine, antibody, protein, polypeptide, antigen-presenting cell or

15   immune effector cell.